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## **CLAIMS**

1. An apparatus comprising:

a device comprising (i) a gate configured to receive an input voltage, (ii) a drain coupled to a first supply voltage, and (iii) a source coupled to an output; and

a resistive element coupled between said source and a second supply voltage, wherein said apparatus provides voltage tolerance between said input voltage and said output.

- 2. The apparatus according to claim 1, wherein said apparatus is further configured to provide fail-safe protection between said input voltage and said output.
- 3. The apparatus according to claim 1, wherein said device is configured in a source-follow configuration.
- 4. The apparatus according to claim 1, wherein said device comprises an NMOS device.

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5. The apparatus according to claim 1, wherein said device comprises a native NMOS device.

- 6. The apparatus according to claim 1, wherein said apparatus is implemented in a low voltage differential circuit.
- 7. The apparatus according to claim 1, wherein said device comprises a PMOS device.
- 8. The apparatus according to claim 1, wherein said device comprises a native PMOS device.
- 9. The apparatus according to claim 1, wherein said first supply voltage comprises a ground voltage.
- 10. The apparatus according to claim 1, wherein said second supply voltage comprises a ground voltage.
- 11. A method for implementing voltage protection comprising the steps of:

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configuring a device to have (i) a gate for receiving an input voltage, (ii) a drain for receiving a first supply voltage, and (iii) a source for presenting an output; and

configuring a resistive element between said source and a second supply voltage, wherein said device provides voltage tolerance between said input voltage and said output.

- 12. The method according to claim 11, wherein said method is further configured to provide fail-safe protection between said input voltage and said output.
- 13. The method according to claim 11, wherein said device is configured in a source-follow configuration.
- 14. The method according to claim 11, wherein said device comprises an NMOS device.
- 15. The method according to claim 11, wherein said device comprises a PMOS device.

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15. The method according to claim 11, wherein said device comprises a native NMOS device.

17. The method according to claim 11, wherein said device comprises a native PMOS device.

## 18. An apparatus comprising:

a first stage comprising (A) a device comprising (i) a gate configured to receive an input voltage, (ii) a drain coupled to a first supply voltage, and (iii) a source coupled to a first output, and (B) alresistive element coupled between said source and a second supply voltage; and

a second stage comprising (A) a device comprising (i) a gate coupled to said first output, (ii) a drain coupled to said first supply voltage, and (iii) a source coupled to a second output, and (B) a resistive element coupled between said source and said first supply voltage, wherein said apparatus provides voltage tolerance between said input voltage and said output.

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19. The apparatus according to claim 1, wherein said first and said second output are multiplexed to present a third output.

## 20. An apparatus comprising:

a first stage comprising (A) a device comprising (i) a gate configured to receive an input voltage, (ii) a drain coupled to a first supply voltage, and (iii) a source coupled to an output, and (B) a resistive element coupled between said source and a second supply voltage; and

a second stage comprising (A) a device comprising (i) a gate configured to receive said input voltage, (ii) a drain coupled to a first supply voltage, and (iii) a source coupled to said output, and (B) a resistive element coupled between said source and a second supply voltage, wherein said apparatus provides voltage tolerance between said input voltage on said output.